

CLAIMS

I claim:

1. A method for managing communications in a wireless network, the method comprising:

measuring at least one level of interference over an air interface;

based on the at least one level of interference over the air interface, selecting a

5 data rate for signals transmitted from the first entity to at least one second entity; and

causing the signals from the first entity to the at least one second entity to be transmitted at the data rate.

2. The method of claim 1, wherein the at least one level of interference is aggregate energy-to-interference over the air interface and the at least one second entity is a plurality of second entities.

3. The method of claim 1, wherein the at least one level of interference is energy-to-interference over the air interface and the at least one second entity is one second entity.

4. The method of claim 1, further comprising:
based on the at least one level of interference, selecting a transmit power for signals transmitted from the first entity to one of the at least one second entity; and

causing the signals from the first entity to the one of the at least one second entity
5 to be transmitted at the transmit power.

5. The method of claim 1, further comprising causing separate signals from one of the at least one second entity to the first entity to be transmitted at a separate transmit power.

6. The method of claim 1, further comprising causing separate signals from the at least one second entity to the first entity to be transmitted at a separate data rate.

7. The method of claim 1 wherein the first entity is a base station having at least one vocoder.

8. The method of claim 1 wherein the at least one second entity is a mobile station having at least one vocoder.

9. A method of managing communications in a wireless network, the method comprising:

measuring an aggregate energy-to-interference of an air interface, the aggregate energy-to-interference being between a base station and a plurality of mobile stations;

5 (i) based on the aggregate energy-to-interference of the air interface being greater than an aggregate set point:

selecting a first data rate for signals transmitted from the base station to the plurality of mobile stations; and

causing the signals from the base station to the plurality of the mobile
stations to be transmitted at the first data rate;
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(ii) based on the aggregate energy-to-interference of the air interface being less
than the aggregate set point:

measuring an energy-to-interference of the air interface, the energy-to-
interference being between the base station and one of the plurality of mobile
stations;
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(a) based on the energy-to-interface of the air interface being less than an
individualized set-point:

selecting a transmit power for the signals transmitted from the base
station to the one of the plurality of mobile stations; and

causing communications from the base station to the one of the
plurality of mobile stations to be at the transmit power; and
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(b) based on the energy-to-interface of the air interface being greater than
the individualized set-point:

selecting a second data rate for signals transmitted from the base
station to the one of the plurality of mobile stations; and
25

causing the signals from the base station to the one of the plurality
of mobile stations to be transmitted at the second data rate.

10. The method of claim 9, further comprising instructing the plurality of
mobile stations to transmit at the first data rate whereby the plurality of mobile stations
responsively transmits at the first data rate.

11. The method of claim 9, further comprising instructing the one of the plurality of mobile stations to transmit at the second data rate whereby the one of the plurality of mobile stations responsively transmits at the second data rate.

12. The method of claim 9, further comprising causing the signals transmitted from the one of the plurality of mobile stations to the base transceiver station to be at the transmit power whereby the one of the plurality of mobile stations responsively transmits at the transmit power.

13. The method of claim 9, wherein the first data rate and the second data rate are selected to be less than a full data rate of a vocoder.

14. The method of claim 9 wherein measuring the aggregate energy-to-interference of the air interface comprises measuring the aggregate energy-to-interference of a reverse link channel of the air interface.

15. The method of claim 9, wherein measuring the energy-to-interference of the air interface comprises measuring the energy-to-interference over a reverse link channel of the air interface.

16. The method of claim 9, wherein the aggregate set point is -8dBm .

17. The method of claim 9, wherein the individualized set point is -8 dBm.

18. A base station comprising:

a processor;

memory;

computer instructions stored in the memory and executable by the processor for

5 performing the functions of:

(i) measuring at least one level of interference over an air interface;

(ii) based on the at least one level of interference over the air interface,
selecting a data rate for signals transmitted from the base station to at least one
entity; and

10 (iii) causing the signals from the base station to the at least one second
entity to be transmitted at the data rate.

19. The base station of claim 18, wherein the data rate is selected from the
group consisting of approximately a full data rate and approximately a 1/2 rate.

20. The base station of claim 18, wherein the at least one level of interference
is aggregate energy-to-interference over the air interface and the at least one entity is a
plurality of entities.

21. The base station of claim 18, wherein the at least one level of interference
is energy-to-interference over the air interface and the at least one entity is one entity.

22. The base station of claim 18, wherein the computer instructions further perform the functions of:

based on the at least one level of interference, selecting a transmit power for signals transmitted from the base station to one of the at least one entity; and

5 causing the signals from the base station to the one of the at least one entity to be transmitted at the transmit power.

23. The base station of claim 22, wherein the computer instructions further perform the function of causing separate signals from one of the at least one entity to the base station to be transmitted at a separate transmit power.

24. The base station of claim 18, wherein the computer instructions further perform the function of causing separate signals from the at least one entity to the base station to be transmitted at a separate data rate.

25. The base station of claim 18, wherein the base station further comprises a vocoder.

26. The base station of claim 18, wherein the at least one entity is at least one mobile station and the at least one mobile station comprises a vocoder.